

Bridge Rectifiers

Features

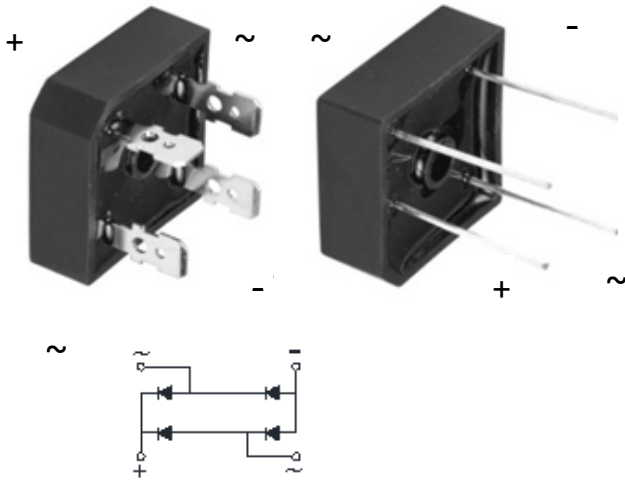
- UL recognition, file #E230084
Universal 3-way terminals: snap-on, wire wrap-around, or PCB mounting
- High surge current capability
- Low thermal resistance
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

General purpose use in AC/DC bridge full wave rectification for power supply, home appliances, office equipment, industrial automation applications.

Mechanical Data

- Package:** BR, BR-W
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
Suffix letter "W" added to indicate wire leads(e.g. BR5010W).



■ Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	BR50005	BR5001	BR5002	BR5004	BR5006	BR5008	BR5010
Device marking code			BR50005	BR5001	BR5002	BR5004	BR5006	BR5008	BR5010
Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Average Rectified Output Current @60Hz sine wave, R-load, With heatsink, $T_c=55^\circ\text{C}$	I_O	A	50						
Surge(Non-repetitive)Forward Current @60HZ Half- sine Wave, 1 cycle, $T_a=25^\circ\text{C}$	IFSM	A	500						
Current Squared Time @1ms \leq t \leq 8.3ms $T_J=25^\circ\text{C}$, Rating of per diode	I^2t	A ² S	1040						
Storage Temperature	Tstg	°C	-55 ~ +150						
Junction Temperature	T_J	°C	-55 ~ +150						
Dielectric Strength, Terminals to case, AC 1 minute	V_{dis}	KV	2.5						
Mounting Torque	TOR	kg·cm	10						

■ Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	BR50005	BR5001	BR5002	BR5004	BR5006	BR5008	BR5010
Maximum instantaneous forward voltage drop per diode	VFM	V	$I_{FM}=25\text{A}$	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	IRRM	μA	$V_{RM}=V_{RRM}$	10						



BR50005(W) THRU BR5010(W)

■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	BR50005	BR5001	BR5002	BR5004	BR5006	BR5008	BR5010
Thermal Resistance	Between junction and case, With heatsink	$R_{\theta J-C}$	$^\circ\text{C}/\text{W}$	1.2						

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BR50005~BR5010	A1	Approximate 18.6	50	50	500	Paper Box
BR50005W~BR5010W	A1	Approximate 16.5	50	50	500	Paper Box

■ Characteristics (Typical)

FIG1:Io-Tc Curve

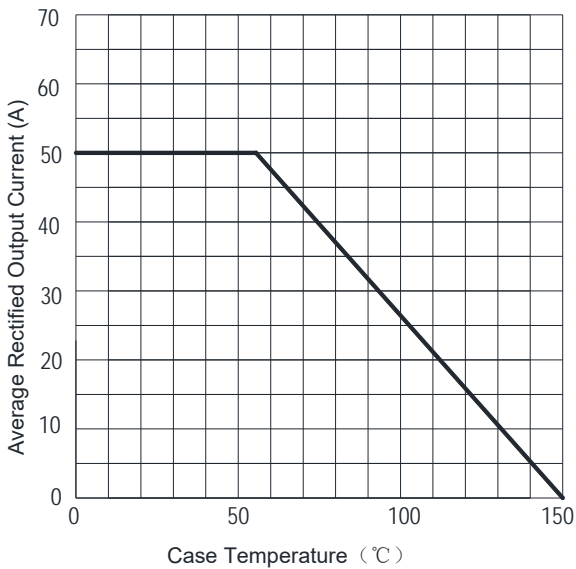


FIG2:Surge Forward Current Capability

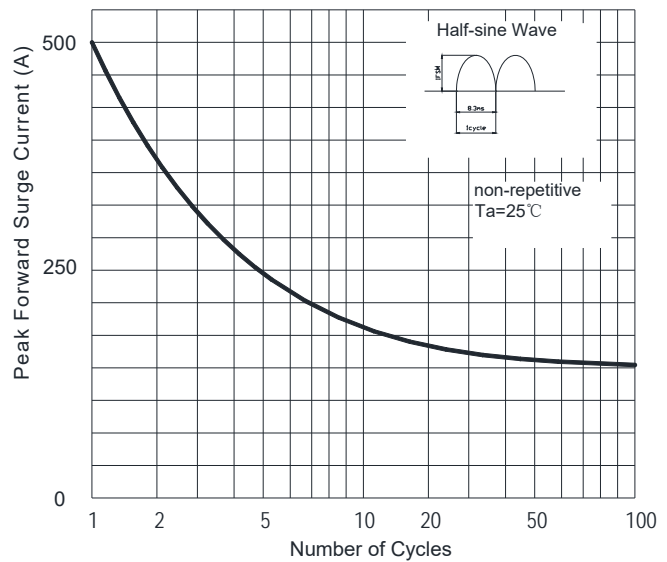


FIG3:Instantaneous Forward Voltage

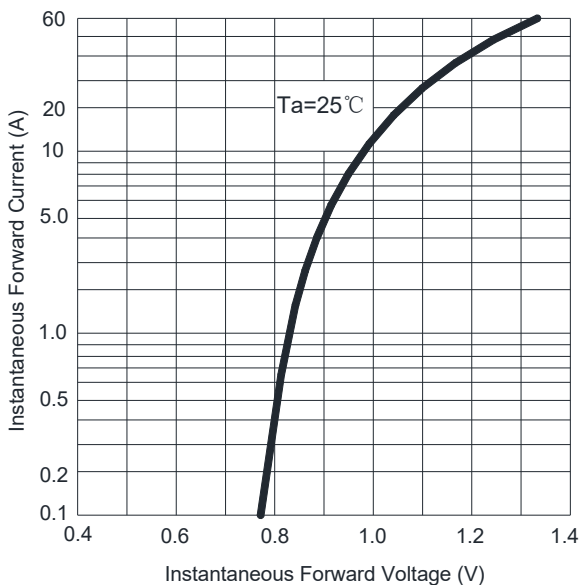
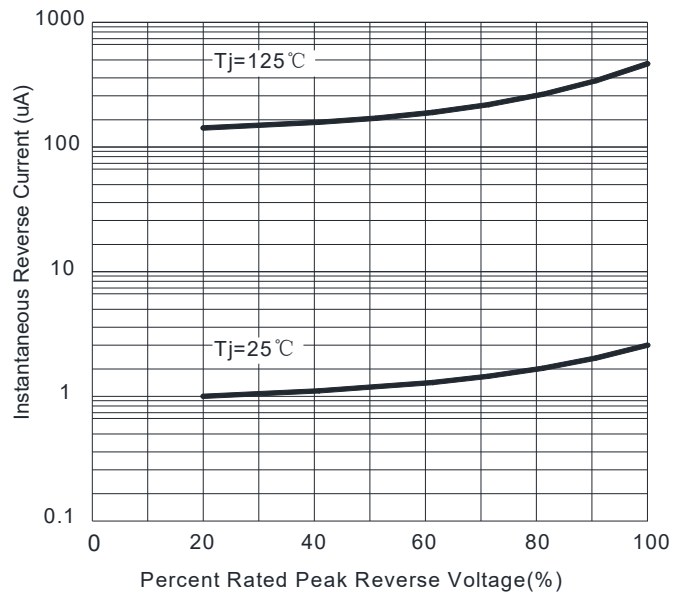


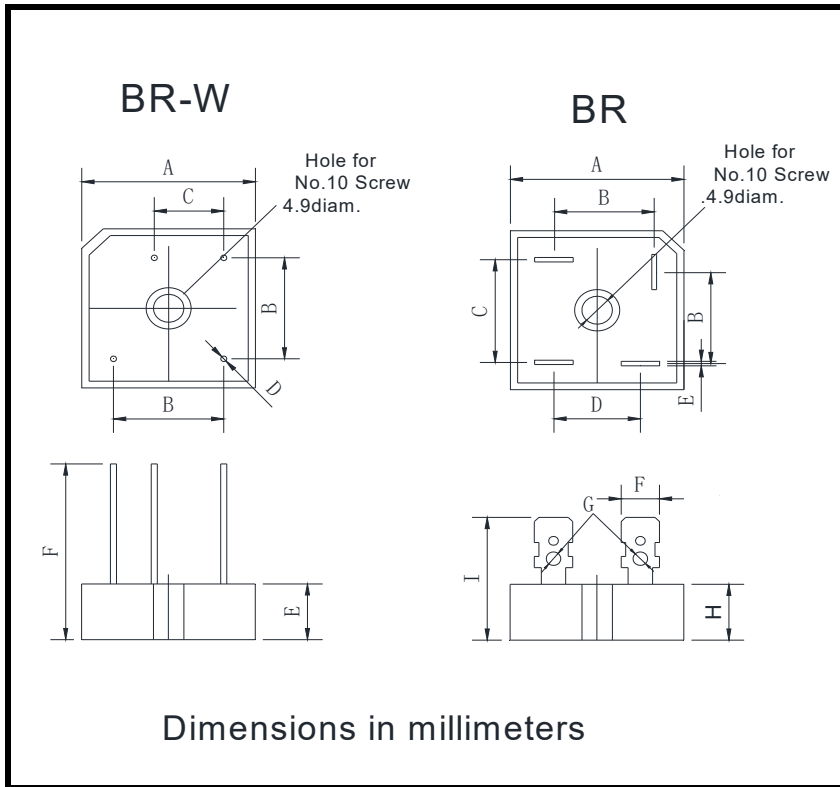
FIG4:Typical Reverse Characteristics





BR50005(W) THRU BR5010(W)

■ Outline Dimensions



BR-W		
Dim	Min	Max
A	28.2	28.8
B	17.1	19.1
C	10.4	12.4
D	0.95	1.05
E	10.8	11.2
F	30	/

BR		
Dim	Min	Max
A	28.2	28.8
B	15.3	17.3
C	17.1	19.1
D	13.2	15.2
E	0.75	0.85
F	6.2	6.4
G	2.3	2.5
H	10.8	11.2
I	19	/



BR50005(W) THRU BR5010(W)

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.